CONTENTS

Volume 5, Issue Nos. 1–6

International Journal of

ADAPTIVE CONTROL AND SIGNAL PROCESSING

Issue No. 1, January–February 1991

EDITORIAL 1

Assessment of Achievable Performance of Simple Feedback Loops: K. J. Åström . 3

An Autosynthesizing Non-linear Control System Using A Rule-based Expert System: J. H. Taylor and P. G. Stringer 21

An Expert System for Interaction Analysis of Multivariable Systems: J. Lieslehto and H. N. Koivo 41

Multivariable Controller Design in an Adaptive Control Scheme: G. K. H. Pang . 63

Issue No. 2, March–April 1991

Optimal Adaptive Signal Processing: An Appraisal: R. R. Bitmead, C. R. Johnson Jr. and C. R. Pollock 87

Merging 'Reasoning' and Filtering in a Bayesian Framework—Some Sensitivity and Optimality Aspects: K. Forsman, L. Ljung, M. Millnert and A. Skeppstedt . . 93

Model Reference Adaptive Control for the Azimuth-pointing System of a Balloon-borne Stabilized Platform: A. O. Chingcuanco, P. M. Lubin, P. R. Meinhold and M. Tomizuka 107

Stable Adaptive Control System Subject to Bounded External Disturbances: S. Cheng 121

Adaptive LQG Controller with Loop Transfer Recovery: T. T. Tay and J. B. Moore . 135

BOOK REVIEWS 151

CONFERENCE DIARY 153

Issue No. 3, May–June 1991

L_p-Stability of Estimation Errors of Kalman Filter for Tracking Time-varying Parameters: J. F. Zhang, L. Guo and H. F. Chen. 155

Stability of the Equilibria of Adaptive Systems with Leakage Estimator: R. Ortega and G. Espinosa 175

Consistent Parameter Estimation for Deterministic MIMO Systems with Over-parametrized Models: L. Mo and M. M. Bayoumi 185

Reference Model Decomposition in Direct Adaptive Control: H. Butler, G. Honderd and J. Van Amerongen 199

TECHNICAL NOTE

A Long-range Adaptive Controller for Time-varying Plants with Sudden Changes: B. M. Costa and J. M. Lemos 219

Issue No. 4, July–August 1991

A Result on the Mean Square Error Obtained Using General Tracking Algorithms: L. Ljung and P. Priouret 231

On the Radius of Stabilizability of LTI Systems: Application to Projection Implementation in Indirect Adaptive Control: B. R. Barmish and R. Ortega . . 251

Decentralized Indirect Adaptive Control of Interconnected Systems: A. Datta and P. Ioannou 259

TECHNICAL NOTE

A Retrospective Self-tuning Controller: S. G. Goodhart, K. J. Burnham and D. J. G. James 283

Issue No. 5, September–October 1991

Robust Failure Detection for Linear Distributed Parameter Systems: S. X. C. Lou and J. Jiang. 293

Some Asymptotic Results in Recursive Identification Using Laguerre Models: S. Gunnarsson and B. Wahlberg 313

Modelling and Self-adjusting Control of an Absorption Column: K. Najim . . 335

BOOK REVIEWS 347

Issue No. 6, November–December 1991

Adaptive Predictive Control of a Continuous Fermentation Process: B. Dahhou, G. Chamilothoris and G. Roux 351

Constrained Long-range Adaptive Predictive Control of Arterial Blood Pressure: K. Y. Kwok, R. K. Mutha, S. L. Shah, A. S. Clanachan and B. Finegan 363

PID, Predictive and Fuzzy Temperature Control for Nuclear Magnetic Resonance Spectroscopy Experiments: P. Grossi and R. Scattolini 375

Remarks on the Mean Square Tracking Error: L. Ljung and P. Priouret . . . 395

Development of a New Self-tuning Control Algorithm for Finite and Infinite Horizon Quadratic Adaptive Optimization: G. Casalino, R. Minciardi and T. Parisini . . 405

CONFERENCE DIARY 427

AUTHOR INDEX 428

KEY WORD INDEX 429